

USSR

MATVEYEV, V. V. et al., Problemy Prochnosti, No 4, Apr 73, pp 8-14

with temperature. Exceptions are noted and explained. A diagram is given comparing the logarithmic decrement for these materials at normal and maximum working temperatures. An examination of this diagram shows that steels of the martensite and martensite-ferrite classes with pronounced magnetomechanical hysteresis (DI-5, EZh1, EI961) have the best damping properties at normal and working temperatures not exceeding 600°C. Titanium alloys showed the poorest damping properties.

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USSR

UDC 624.07:534.1

KSCHUK, A. I., NAKONECHNYY, P. S., KARPENKO, B. K., MATVEYEV, V. V.

"Method for the Automatic Determination of the Amplitude-Frequency Characteristics of a Mechanical System Over a Wide Spectrum of Its Natural Frequencies"

V sb. Rasseyanije energii pri kolebaniyakh mekh. sistem (Energy Scattering Under Vibrations of Mechanical Systems -- Collection of Works), Kiev, "Nauk. dumka", 1972, pp 292-296 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V290)

Translation: A device with electronic synchronization of processes for the recording and measurement of frequency of the master oscillator is described that has many advantages as compared with mechanical synchronization. The device is designed to determine amplitude-frequency characteristics of complex mechanical systems over a wide range of natural frequencies and provides a quantitative analysis of these systems and the resonance zones when slight departures in the master oscillator and the distortion in the shape of the amplitude-frequency characteristics associated with them do not have a considerable value. A block diagram of one of the versions of the device is given. The operating principle is described. Yu. A. Belyayev.

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USSR

UDC 624.07:534.1

MATVEYEV, V. V., BASHTA, O. T.

"On Testing the Correctness of an Experiment to Study Energy Scattering
in the Material of Rods Under Vibrations"

V sb. Rasseyaniye energii pri kolebaniyakh mekh. sistem (Energy Scattering
Under Oscillations of Mechanical Systems -- Collection of Works), Kiev,
"Nauk. dumka", 1972, pp 172-178 (from RZh-Mekhanika, No 3, Mar 73,
Abstract No 3V268)

Translation: The effect of structural energy losses at points of reinforcement of a test sample on the decrement in bending and torsional vibrations is evaluated. A polynomial functional dependence between energy scattering at points of reinforcement and the amplitude of the bending or torsional (respectively) moment in the root cross section of the rod is assumed in accordance with known experimental results. Experimental results for a series of samples with different dimensions were processed using the resulting semiempirical relationships between the decrement and the parameters of the test sample. It is pointed out that the role of energy scattering in the

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MATVEYEV, V. V., BASHTA, O. T., Rasseyaniye energii pri kolebaniyakh mekh. sistem, 1972, pp 172-178

seals under bending oscillations is inconsiderable in the experiments conducted and that losses in the seals play a predominant role for the type of reinforcement of the sample under torsional vibrations. 9 ref. Yu. G. Balakirev.

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USSR

UDC 539.67

KRIVONOGOV, G. S., MATVEYEV, V. V., ALEKSEYENKO, M. F., LIVSHITS, B. G.,
and YAKOVLEV, A. P.

"Certain Regularities of Magnetic Hysteresis in Stainless Martensite Class
Steels"

Sb. "Vnutrennuye treniye v metallicheskikh materialakh" (Internal Friction in
Metallic Materials), Moscow, Izd-vo "Nauka," 1970, pp 170-175

Abstract: The effect of temperature and static stresses on the magnitude of
hysteresis losses in stainless steels of the martensite class, related mainly
to the process of irreversible displacements of 90° domain walls, is studied.

Expressions are derived for the dependence of damping decrement on temper-
ature, static stresses, and magnetomechanical hysteresis constants. The effect
of various heat treatment conditions on magnetomechanical hysteresis is
discussed. Good agreement was obtained between experimental and theoretical
data. 4 figures, 5 references.

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USSR

UIDC 934.280

MATVEYEV, V. V., BASHTA, O. T., Kiev

"The Significance of Energy Losses in the Surface Layers of a Material in Studying the Influence of Rod Dimensions on Damping of Oscillation"

Kiev, Problemy Prochnosti, No 5, May, 1971, pp 23-29.

Abstract: Formulas are concluded for calculation of the logarithmic oscillation decrement of specimens of various sizes considering the singular properties of the surface layer. The cases of bending longitudinal and twisting oscillations of specimens are considered, when the energy dissipated in an oscillating cycle in the surface layer and main mass of the rod material is related to the amplitude of cyclical deformation by an exponential dependence.

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USSR

UDC: 539.1.07

MATVEYEV, V. V.

"Radiometric and Radiation Monitoring Equipment of the Near Future"

Tr. Soyuzn. n.-i. in-ta oriborestr. (Works of the Union Scientific Research Institute of Instrument Building), 1970, vyp. 12, pp 3-14 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 11, Nov 70, Abstract No 11.32.1484)

Translation: The paper takes up the present state and trends in development of radiometric and radiation monitoring equipment. Basic assumptions are given on the development of a united system of instruments in the field of measuring physical quantities which characterize ionizing radiation. The authors describe new types of radiometric and radiation monitoring equipment which has been recently developed and made ready for series production. Five illustrations, bibliography of three titles.

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USSR

UDC: 539.16.04.08

KONSTANTINOV, D. I., MATVEYEV, V. V., YUZVUK, Yu. A.

"On Optimizing the Parameters of Radiometric Equipment When Determining Low Levels of Radiation"

Tr. Sovuzn. n.-i. in-ta priborostroj. (Works of the Union Scientific Research Institute of Instrument Building), 1970, vyp. 12, pp. 15-20 (from PEh-Metrologiya i Izmeritel'naya Tekhnika, No 11, Nov 70, Abstract No 11.32.1472)

Translation: The authors consider the possibility of using the method of verifying statistical hypotheses to derive working formulas for determining the threshold of sensitivity of radiometric equipment in measuring vanishingly small concentrations of radioactive isotopes. It is shown that Gaussian distribution can be used to approximate the Poisson probability distribution of readings up to unity. A working formula is given for the sensitivity threshold of a radiometric unit with a known photon flux. Five illustrations, bibliography of five titles.

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1/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--DETERMINATION OF THE DECREMENT OF VIBRATIONS DURING AUTOMATIC
RECORDING OF THE NUMBER OF CYCLES -U-
AUTHOR--(02)-MATVEYEV, V.Y., CHAYKOVSKIY, B.S.

COUNTRY OF INFO--USSR

SOURCE--PROBLEMY PROCHNOSTI, VOL. 2, MAR. 1970, P. 42-46

DATE PUBLISHED----MAR 70

SUBJECT AREAS--PHYSICS, METHODS AND EQUIPMENT

TOPIC TAGS--VIBRATION MEASUREMENT, VIBRATION DAMPING, AUTO RECORDER, DATA
RECORDING, ERROR ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1387

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CIRC ACCESSION NO--AP0125035
UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0125035

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTION OF A DEVICE FOR AUTOMATIC RECORDING OF THE NUMBER OF VIBRATION CYCLES IN A GIVEN INTERVAL OF A CHANGE IN THE AMPLITUDE OF DAMPED VIBRATIONS. SPECIAL ATTENTION IS GIVEN TO THE EVALUATION OF ERRORS ARISING IN THE DETERMINATION OF THE LOGARITHMIC DECREMENT. THESE ERRORS ARE DUE TO (1) AVERAGING THE DECREMENT VALUE WITH RESPECT TO AMPLITUDE, AND (2) INACCURACY IN RECORDING THE NUMBER OF VIBRATION CYCLES.

FACILITY: AKADEMIIA NAUK UKRAINSKOI SSR, INSTITUT PROBLEH PROGNOSTI, KIEV, UKRAINSKOI SSR.

UNCLASSIFIED

USSR

M

UDC 621.382.8

SURIN, YU. V., MATVEYEV, V. V.

"Microminiature Radio Frequency Signal Mixer Using the Hall Element"

Elektron. tekhnika. Nauchno-tekhnik. sb. (Electronic Engineering. Scientific and Technical Collection), 1970, ser. 6, vyp. 1 (22), pp 29-35 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9D20)

Translation: This article contains a discussion of the results of investigations of a miniature frequency converter executed in the form of a flat spiral coil with a Hall element located near its center. This design permitted a reduction in size of the converter and manufacture of it in the form of a flat structure with conversion losses \leq 52 decibels and conversion frequencies up to 13 megahertz. Comparison of the miniature converter with the volumetric converter also using a Hall element is made.

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Stress Analysis and Stability Studies

UKRAINIAN SSR

UDC 539.67

MATVEYEV, V. V., YAKOLEV, A. P., of the Institute on Problems of Strength,
Academy of Sciences of the Ukrainian SSR, Kiev

"On the Application of the Phase Method for Determining the Decrease in
Oscillation of Nonlinear Systems of the Hysteresis Type"

Kiev, Prikladnaya Mekhanika, Volume 6, No 3, March 70, pp 105-108

Abstract: The nonlinear system taken as an example in this article is a rod of constant cross section and rigidity, making transverse oscillations under the action of a smoothly distributed exciting force, which is a function of position along the length of the rod. Using Pisarenko's method of approximation to the differential equations describing this system, it is possible to determine the energy dissipated in the system in one cycle of oscillation and the elastic energy corresponding to a given amplitude of the deflection of the rod. These values can then be used to determine the decrement in oscillation which corresponds to a given angle of deflection and, finally, a relationship between the decrement and the phase shift angle between the exciting force and the oscillation of the rod. However, the equation obtained contains an integral expression which makes a direct derivation of the decrement extremely difficult, except in the case of viscous friction, in which the principle
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UKRAINIAN SSR

MATVEYEV, V. V., et al, Kiev, Prikladnaya Mekhanika, Vol 6, No 3, March 70 pp 105-108

function under the integral is proportional to the first degree of velocity, causing the integral to vanish.

Substituting values determined for the resonant case in the expression for the exciting force, an expression is obtained which gives the coefficient in the computed equation for oscillation decrement as a function of the width of the resonance curve in terms of the phase shift angle.

The final expression obtained is relatively simple, and it is stated that the use of Soviet phasometers with a measurement accuracy of 0.0087 radians makes it possible to determine the decrement in oscillation with adequate accuracy from the phase angle.

There are five references, all to Soviet sources.

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Acc. Nr:

AP0045061Abstracting Service: 570 Ref. Code:
INTERNAT. AEROSPACE ABST. U R 0198

A70-23295 - Determination of the vibration decrement of nonlinear systems of hysteresis type from the resonance curve (K opredelenii dekrementa kolebaniii nelineinnykh sistem gisterezisnogo tipa po rezonansnoi krivoi). V. V. Matusev, A. P. Iakovlev, and I. M. Vasiniuk (Akademiiia Nauk Ukrainskoi SSR, Institut Problem Prochnosti, Kiev, Ukrainian SSR, Prikladnaiia Mekhanika, v.1, 6, Jan. 1970, p. 108-112. 6 refs. In Russian.)

Study of the possibilities of a method of determining the vibration decrement of an elastic system from the width of the resonance peak of the amplitude curve of the displacement. It is shown that, in addition to the possibility of determining the vibration decrement when the displacement amplitude of the investigated specimen is commensurate with the gap between the electromagnet and the specimen, the proposed method also has the advantage that the formula for calculating the decrement is independent of the nonlinearity of the dissipative forces, owing to the fact that all points of the amplitude curve of the perturbing force correspond to one and the same displacement amplitude and, consequently, to one and the same decrement value for any dependence of the decrement on the amplitude.

A.B.K.]

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REEL/FRAME
19771974

ACD

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UIC: 543.53:539.1.07.543

USSR

YEGIAZAROV, B. G., MATVEYEV, V. V., SEL'DYAKOV, Yu. P.

"Commercial Combined System of Nuclear Instruments for Instrumental Activation Analysis"

Moscow, Atomnaya Energiya, Vol 34, No 2, Feb 73, pp 97-104.

Abstract: The necessary composition and components of a standardized instrumental activation analysis system have been determined. They include: 1) a two-channel pneumatic transport system with centralized control panel; 2) a single-channel pneumatic transport system with centralized control panel; 3) an all-wave neutron monitor; 4) a conversion system with digital indicator, designed for loads up to $4 \cdot 10^6$ pulses per second; 5) a scintillation detection unit; 6) a four-channel spectrometric installation with a set of four detection units and lead containers; 7) a computer, designed for processing of analysis data; 8) a universal summary coincidence spectrometer; 9) a gamma radiation spectrometer; 10) a multichannel pulse amplitude analyzer; 11) a printer; 12) a tape and card puncher; 13) a system for direct input of data to a computer; 14) a gamma radiation dosimeter with signaling device; 15) a gamma radiation dosimeter; 16) a neutron dosimeter.

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USSR

Yegiazarov, V. G., Matveyev, V. V., Sel'dyakov, Yu. P., Moscow, Atomnaya Energiya, Vol 34, No 2, Feb 75, pp 97-104.

Block diagrams of various combinations of the individual elements of the system are presented, plus a photograph of the KAMA-1-01 functional system, consisting of two subsystems: 1) the pneumatic transport system; 2) a universal gamma spectrometer.

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REF ID: A6467

USSR

TATEVOSYAN, YE. L., VILADYAN, L. S., PAVLOV, K. R., ~~and others~~ 2000-00-00

"Aging of Plastics Under Tropical Conditions"

Moscow, Plasticheskaya Promst., No. 3, 1972, pp. 64-67

Abstract: Stability of plastics was investigated under conditions of tropical rain and a humid hot climate. Comparison of laboratory and field tests made it clear that a 3 month laboratory test corresponds to 2 years of field study. Considering that 3 month laboratory tests corresponded to 2 years of field study, the materials tested were found to be stable under tropical conditions for 5 years, and on the basis of the insignificant changes which took place, the materials can be recommended for up to ten years. Every review and comparison made from this work indicated that for up to two years at least, some parameters changing significantly after 1 month to two years at best, were parameters changing sufficiently after 1 month to two years at best, and polymers begin to deteriorate after 3-5 months, unless they are filled with fillers. The most significant changes were found to be that the film becomes brittle with fillers. These types of materials could necessarily be used for the tropic condition; these types of materials could necessarily be used for the tropic condition; provided they were not exposed to direct sunlight. Polymers containing vinylidene propionate were not exposed to direct sunlight. Polymers containing vinylidene propionate up to six months; then vulcanized with carbon black, vinylidene propionate up to six months; then vulcanized with carbon black, their properties increase to about 2 years. Both polyvinyl chloride or methyl acrylate, their stability increases to about 2 years. Both polyvinyl chloride or methyl acrylate, their stability increases to about 2 years. Both polyvinyl chloride or methyl acrylate, their properties for three months, the rate of change of polyvinyl chloride or methyl acrylate, their properties for three months, the rate of change of

USSR

FEDOROV, V. N., ROZENBERG, V. M., MUKHIN, N. I., GAS'KOVA, V. L., KOZHEVNIKOV,
V. I., MATVEYEV, Yu. A., and POKROVSKAYA, G. N., Planning Institute of Alloys and Treatment of Nonferrous Metals
State Scientific Research and

"Copper Base Alloy"

UDC 669.35'295'6'26:621.315.5(068.8)
USSR Authors' Certificate No 263157, Cl. 40 b, 9/00, (C22c), filed 19 Nov 68,
published 29 May 70 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12
1849 P by A. ZIL'BERMAN)

Translation: An alloy is suggested which differs from known alloys in its
lowered Ti and Sn content and which is characterized by the following con-
position (in %): Ti 0.03-0.15, Sn 0.1-0.25, Cr 0.05-0.6 and the remainder
Cu. After hardening, cold deformation due to drawing, and tempering, the
alloy has σ_B 60 kg/sq mm, δ 4%, and conductivity 70% that of Cu. The alloy
can be successfully employed as a current-carrying conductor.

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USSR

UDC 669.15'74'292'295:620.178.16

MATVEYEV, YU. G., BUKHTIN, V. S., and TARASKO, D. I., Eastern Scientific Research Mining Institute (Novokuznets) and Siberian Metallurgical Institute

"Results of Laboratory Studies on the Wear Resistance of Steel 110G13L Alloyed with Vanadium, Modified with Titanium and Explosive Strengthened"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Chernaya Metallurgiya, No 8, Aug 73, pp 129-132

Abstract: The effect of additions of vanadium and titanium on the wear resistance of steel 110G13L and the effect of explosive strengthening with a varying degree of cold working on the wear resistance of the same steel alloyed with V and Ti were established. Five heats were tested in which the vanadium content varied from 0.00 to 0.71% and the titanium content -- 0.00 to 0.07%. It was restablished that additions of the two carbide-forming elements increase the wear resistance of this steel with the best results achieved with additions of 0.5-0.7% V and 0.04-0.07% Ti. Explosive strengthening also increases wear resistance and the optimum hardness of the steel from explosive cold working was 310-350 Bhn. With V and Ti added, the hardness from cold working is increased by 10-15 units. Two figures, and five bibliographic references.

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UDC 612.821

USSR

BEKTEREVA, N. P., KAMBAROVA, D. K., and MATVEYEV, YU. K., Division of Applied
Neurophysiology, Institute of Experimental Medicine, Academy of Medical
Sciences USSR, Leningrad

"Functional Characteristics of Links in Cerebral Systems for Control of Mental
and Motor Functions in Man"

Leningrad, Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, Vol 56, No 8,
Aug 70, pp 1,081-1,097

Abstract: The impulse activity patterns in neuronal structures of the brain
were studied during motor and psychological tests administered under ordinary
conditions and after administration of neurotropic drugs. Areas of character-
istic reproducible impulse patterns were discovered in various brain structures
of patients with Parkinson's disease. Gold electrodes were used for the mea-
surements, and the impulse activity was calculated by conventional means and
by computer. To study the distribution of active neurons, the "specific
activity" (i.e., the number of impulses per unit volume and unit time) was
used. Comparison of impulse activity prior to and during the test and of
the effects when the test was repeated made it possible to clearly define the
activity and to refine the links of the systems of central control for various

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USSR

BEKHTEREVA, N. P., et al, Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, Vol 56, No 8, Aug 70, pp 1,081-1,097

forms of activity. It was shown that during psychological tests the discharge frequency increased not only when the number of active neurons increased but also when it decreased. It is proposed that the phenomenon of lateral inhibition is of importance in the activity of neuron groups. When neurotropic drugs (deseril, L-DOPA) had been administered, the background frequency shifted as did the pattern of impulse activity during psychological and motor tests. A few links of the brain systems for mental and motor control could be more clearly defined by the "inclusion" or "exclusion" brought about by the neurotropic drugs.

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Acc. Nr:
AP0047609

Abstracting Service: Ref. Code:
INTERNAT. AEROSPACE ABST. 5-70 21 R 0141

A70-25154 # Dispersion of the coefficient of radio wave reflection from plane surfaces (Dispersion koefitsienta otnoshenija radiovoln ot ploskikh poverkhnostej). Yu. G. Matveev (Irkutskii Gosudarstvennyi Universitet, Irkutsk, USSR). Radiofizika, vol. 13, 221/442, no. 2, 1970, p. 225-230, 7 refs. In Russian.

Investigation of the problem concerning the theoretical analysis of measured radio wave reflection spectra from plane surfaces in order to determine their physical properties and to specify their composition. The problem arises in using radio astronomy and radar measurements to study lunar and planetary surfaces. Attention is initially given to the dispersion of the coefficient of radio wave reflection from a homogeneous medium; this is followed by an analysis of reflection from a medium which is inhomogeneous in the direction of wave propagation. The study is limited to the normal incidence of plane waves on a plane surface. T.M.

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REEL/FRAME
19791175

USSR

UDC 681.121

KUZ'MIN, V. V., PAFURIN, A. V., TUPICHENKOV, A. A., MATVEYEV, Yu. F.

"The Problem of Determination of Optimal Points for Installation of Flow Rate Measuring Devices Considering Wall Roughness"

Tr. Metrol. In-tov SSSR [Works of Metrology Institutes, USSR], 1972,
No 135 (195), pp 98-106, (Translated from Referativnyy Zhurnal, Metrologiya
i Izmeritel'naya Tekhnika, 1972, No 5, Abstract No 5.32.754).

Translation: Results are presented from experimental determination of lengths of sectors of hydrodynamic stabilization with even distribution of velocity at the inlet to a tube. The experiments were performed using water in the range of Reynolds numbers from $5.1 \cdot 10^4$ to $5.4 \cdot 10^5$, both in the smooth flow mode and with natural and artificial roughness

$$\left(\frac{k_a}{r_0} = 10^{-2} \text{ and } \frac{k_a}{r_0} = 1.44 \cdot 10^{-2} \right) \quad \text{and} \quad \frac{k_a}{r_0} = 10^{-1} \text{ and } \frac{k_a}{r_0} = 1.44 \cdot 10^{-1}.$$

The results show that an increase in roughness causes a decrease in the length of the initial sector. 5 Figures; 18 Biblio. Refs.

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UDC 612.822.3.087

USSR

MATVEYEV, Yu. K., Department of Applied Neurophysiology of the Institute of Experimental Medicine, USSR Academy of Medical Sciences, Leningrad

"Time-Space Dynamics of Pulsed Activity in the Neuron Populations of the Human Brain"

Leningrad, Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, Vol 58, No 9,
1972, pp 1,341-1,346

Abstract: A differentiated study was made of the pulse activity of the neuron groups of the subcortical structures of the human brain in order to trace the nature of the interaction of neurons located close to each other and the participation of the neurons in various functions of the organism and their reactions to sensory stimuli. By applied functional tests, the neuron ensembles were isolated -- groups of nerve cells reacted in the same way to afferent stimulation. With an increase in the number of discharges of one group of neurons, a decrease in the number of discharges in another group can occur. Such time-space dynamics can be connected with the lateral interaction of the neurons leading to inhibition of their activity. Graphs are presented showing the pulse activity of the neuron population recorded by implanted 50-100 micron gold electrodes, the dynamics of the pulse activity frequency

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USSR

MATVEYEV, Yu. K., Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, Vol 58,
No 9, 1972, pp 1,341-1,346

during motor tests and the dynamics of the pulse activity frequency of the
lateral segment of the globus pallidus and the pons Varolii during psycholog-
ical tests.

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UDC 612.821.2+616.831-073-97

USSR

BEKHTEREVA, N. P., BUNDZEN, P. V., MATVEYEV, YU. K., and KAPULNOVSKIY, A. S.,
Institute of Experimental Medicine, Academy of Medical Sciences USSR, Leningrad
"Functional Reorganization of the Activity of Human Brain Neuronal Assemblies
in Short-Term Memory"

Leningrad, Fiziologicheskiy Zhurnal SSSR, No 12, 1971, pp 1,745-1,761

Abstract: The functional reorganization of the activity of cerebral neuronal assemblies was studied by means of verbal tests (3 to 5 words of one syllable) of short-term memory given to four persons with 36 or more electrodes implanted in different subcortical structures and various portions of the cortex. The data were processed with the assistance of analog and digital computers using continuous amplitude discrimination of multicellular activity, dynamic selective correlation, and classification, factor, and information analysis. The experiments showed that the trace processes originating in the neuronal assemblies at the time of presentation of the verbal stimuli took on the appearance of spatial and temporal patterns reflecting the dynamic spectra of the acoustic signals used. Retention of the words led to substantial reorganization of the trace processes in accordance with the general laws governing the reconstruction of self-organizing biological systems and occurring against a background of relative stability of the resulting functional organization of the neuronal assemblies.

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USSR

UDC 621.357.8.035.4:669.14(038.8)

SHTAN'KO, V. M., LIPKIN, Ya. N., NOVIKOV, V. G., VOLKOV, Yu. M., STRIEHAK, G. K., RABINOVICH, O. Ya., ZIMOVETS, V. G., DANILOV, A. M., MATVEYEV, Yu. M., MEDNIKOV, Yu. A.

"Electrolyte for Electrochemical Polishing of Products"

USSR Author's Certificate No 306186, Filed 28/10/69, Published 21/07/71,
(Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No
3 L283 P from the Resume).

Translation: An electrolyte for electrochemical polishing of products, for example of stainless steel, differing in that in order to improve the quality of polishing and intensify the process, a foam suppressor is introduced to the electrolyte with the following relationship of components (in wt.%): orthophosphoric acid 30-70, H_2SO_4 10-40, H_2O 10-30 and above 100%. Surface-tants based on peptide and polypeptide salts, 1-10 g/l, foam suppressor 0.001-1 g/l. Polymethylsiloxane liquid is used as the foam suppressor.

I/1

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USSR

MATVEYEV, YU. M., ZAYONCHIK, L. I., SITNIKOV, L. L., OSTRYAKOV, V. V.

"Strain Study of Mechanically Inhomogeneous Bodies Using Optically Sensitive Coatings"

Moscow, Zavodskaya Laboratoriya, Vol XXXVII, No 4, 1971, pp 468-471

Abstract: A study is made of the stress-strain state of mechanically inhomogeneous bodies using optically sensitive coatings. The effect of mechanical inhomogeneity of the medium on the stress-strain state and the nature of development of the zones of plastic flow are estimated. The layer of coatings is applied to the reflecting surface of a bimetal sample, and the optical effect is established in the form of a Moray pattern and the isochrome pattern. The penetration of the zone of plastic flow as a function of the degree of relative reduction during the process of reducing homogeneous discs made of soft and hard lead-antimony alloys and bimetal discs is plotted, and the kinetics of development of the normal stresses in the center of a disc are illustrated for two inhomogeneity diagrams.

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Welding

UDC 621.774.2

USSR

MATVEYEV, Yu. M., MAKAROV, I. P., KRYUKOV, V. N., ZUBAREVA, V. A., SAMARYANOV,
Yu. V., ANTIPOV, B. F., KOZLOV, D. G., and ZIMINA, N. G., Ural Scientific
Research Pipe Institute, Vyksunskiy Metallurgical Plant

"Production of Furnace-Welded Pipes With Oxygen Blowing of Skelp Edges"

Moscow, Metallurg, No 1, Jan 71, pp 34-35

Abstract: The quality of furnace-welded pipe is assessed by the welded seam quality, which is a function of the chemical composition of the metal, reduction in the welding pass, heating temperature, and the finish of the edges to be welded. In order to remove the scale and preheat the metal prior to welding, the edges are blown with high-pressure air. Blowing with oxygen makes it possible to raise the temperature of the edges. Oxygen facilitates the melting of refractory oxides and their removal from the surface of the skelp. The use of oxygen for blowing skelp edges on the furnace welding line of the Vyksunskiy Metallurgical Plant resulted in a marked increase in the quality of pipes. The strength of the weld in cone flaring tests was found to increase more than six-fold and the weld structure improved as well. The yearly savings with the use of oxygen on one mill was about 50,000 rubles.

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Explosives and Explosions

USSR

GORDEYEV, V. YE., MATVEYEV, YU. S., and TROSHIN, YA. K., Institute of Chemical Physics, Acad. Sc. USSR, Moscow

"Explosion of Nitroglycerine in Thin Walled Tubes"

Moscow, Doklady Akademii Nauk SSSR, Vol. 195, No 5, Dec 70, pp 1143-1146

Abstract: Investigation was carried out on low velocity detonation [lvd] of liquid explosives to find out whether the so-called cavitation or spin hypothesis on the mechanism of lvd spreading is valid. Nitroglycerine was used in the experiments, the detonations being performed in thin walled plastic tubes and monitored with high velocity photography. Experimental data obtained support unequivocally the cavitation mechanism for the formation of new explosion foci in nitroglycerine during the spreading of lvd. The lvd spreads in thin walled tubes only when the nitroglycerine is sufficiently sensitive to the cavitation initiation of the detonation, the new detonation foci appearing only after a cavitation zone has formed. The appearance of this zone is inevitable since it is caused by stretching tension which always forms in liquids following their compression and weak initiation; this phenomenon does not relate necessarily to the vibration of the vessel walls.

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USSR

UDC:662.232.1+534.212.2

GORDEYEV, V. Ye., MATVEYEV, Yu. S., VELINA, N. F., Moscow

"Influence of Initial Temperature on Velocity of Low-Speed Detonation in Nitroglycerin"

Novosibirsk, Fizika Goreniva i Vzryva, Vol. 6, No. 3, Sep 70, pp. 352-358

Abstract: The spin hypothesis of slow detonation in nitroglycerin has been strongly supported by the first detonation imprints of low speed nitroglycerin detonation. However, this should indicate that even comparatively slight changes in the initial temperature of the material reacting in the detonation wave should lead to noticeable changes in detonation parameters. The purpose of the present work was experimental investigation of these changes. The results of the experiments do not allow an unambiguous conclusion to be drawn concerning the nature and mechanism of propagation of detonation in nitroglycerin at low velocity. However, they do indicate that the sensitivity of nitroglycerin to cavitation does not determine the value of the low detonation speed. They also indicate that the cavities in nitroglycerin detonating at low speed result from oscillations propagating in the liquid itself, not along the vessel walls.

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1/2 - 020
TITLE--VIROLOGIC AND MORPHOLOGIC INVESTIGATION OF COXSACKIE INFECTION IN
GRAVID MICE -U-
UNCLASSIFIED
PROCESSING DATE--18 SEP 70
AUTHOR-(02)-ANDRUSHCHENKO, N.I., MATVEYEV, YU.V.
M

COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 1, PP 68-72

DATE PUBLISHED----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--COXSACKIE VIRUS, WHITE MOUSE, ANIMAL REPRODUCTION, MORPHOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0402/70/000/001/0069/0072

PROXY REEL/FRAME--1987/0080

CIRC ACCESSION NO--AP0103760 UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--18SEPT0

2/2 020
CIRC ACCESSION NO--AP0103760
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER PRESENTS THE RESULTS OF INVESTIGATION OF REPRODUCTION OF COXSACKIE B3 VIRUS AND MORPHOLOGICAL CHANGES IN THE ORGANISMS OF GRAVID AND NONGRAVID WHITE MICE. THE STUDIES WERE CARRIED OUT IN 144 GRAVID AND 90 NONGRAVID MICE WEIGHING 18-20G. THE ANIMALS WERE INOCULATED INTRAPERITONEALLY WITH 0.3ML OF TISSUE CULTURE FLUID OF NANCY STRAIN. THE VIRUS WAS DETECTED IN ALL ORGANS OF THE ANIMALS OF BOTH GROUPS WITHIN THE FIRST HOURS AFTER INOCULATION. IN GRAVID MICE THE VIRUS MULTIPLIED TO HIGHER TITERS AND PERSISTED LONGER IN THE BLOOD AND THE VISCERA. HISTOLOGIC EXAMINATION DEMONSTRATED SEVERE LESIONS OF DYSTROPHIC AND NECROBIOTIC NATURE IN MANY ORGANS. LESIONS OF VISCERA WERE FOUND TO BE OF THE SAME TYPE BOTH IN GRAVID AND NONGRAVID MICE BUT IN THE FORMER THEY WERE MORE MANIFEST.

UNCLASSIFIED

USSR

UDC: 669.189:621.746.7.001

BORISOV, V. T., VINOGRADOV, V. V., DURHIN, A. I., MANOEVIN, A. I.,
MATVEYEV YU. YE., SOKOLOV, L. A. and SHISHKOV, V. T., (Moscow)

"Applicability of the Quasi-Equilibrium Two-Phase Zone Theory to the
Description of Ingot Crystallization"

Moscow, Izvestiya Akademii nauk SSSR, Metallo, no 6, Nov-Dec 71, pp 104-109

Abstract: Increasing the requirements on metal quality necessitates more intimate knowledge and in-depth analysis of the fine points of alloy crystallization phenomena. Noteworthy, in this case, is the study of the quasi-equilibrium two-phase zone of an alloy --- a region in which thermal, diffusion, and other processes accompanying the formation of the ingot's structure take place. This study is an attempt to test the applicability of the theory to computer analysis of the crystallization of a metal ingot. Described is a crystallizer designed for the study of thermal conditions in the two-phase zone of an ingot for crystallization at both low and high cooling rates. A mathematical arrangement is proposed characterizing a crystallizing ingot in terms of the new theory. The correlation of the theoretical results with the experimental data indicates that the proposed

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USSR

BORISOV, V. T., et al, Izvestiya Akademii nauk SSSR, Metallo, no 6,
Nov-Dec 71, pp 104-109

mathematical model provides both qualitative and quantitative patterns of
the thermal and other real conditions of ingot crystallization.
(2 illustrations, 13 bibliographic references).

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UDC 619.616.986.7-036.21:635

USSR

DRAGOMIR, A. V., and MATVEYEVA, A. A., Moldavian Republic Veterinary Laboratory

"Leptospira Carrier State in Animals"

Moscow, Veterinariya, No 10, 1971, pp 66-67

Abstract: In Kotov and Vulkanesht rayons of Moldavia, 6 Leptospira cultures (Hebdomadis serogroup) were isolated from 893 rodents (wood, field, and house mice and Norway rats) and 14 cultures (Hebdomadis serogroup) from 214 healthy cattle. Guinea pigs, white mice, rabbits, hamsters, and puppies inoculated with some of the Leptospira cultures developed clinical symptoms of the disease 3 to 5 days later. Leptospira cultures similar to the original ones were isolated from the heart and kidneys of the experimental animals at this time.

1/1

USSR

VOLKOV, N. I., IORDANSKAYA, F. A., and MATVEYEVA, E. A., Candidates of Biological Sciences, State Central Order of Lenin Institute of Physical Culture and All Union Scientific Research Institute of Physical Culture

"Change in Work Capacity of Athletes Under Conditions of Medium-Sized Mountains"

Moscow, Teoriya i Praktika Fizicheskoy Kul'tury, No 7, 1970, pp 43-48

Abstract: A study was made of the work capacity of 16 long-distance runners, bicyclists, and rowers on the Soviet Olympic team who participated in the 1968 games to check on the effectiveness of the training methods employed. Each athlete was examined three times: (1) in Moscow (at sea level) shortly before departing for Mexico, (2) the first week in Mexico City, and (3) the third week in Mexico City. All were tested on a bicycle ergometer and various physiological indices recorded - heart rate, level of oxygen consumption, blood pressure, and so forth. The results indicated that the main factor responsible for the initial decline in work capacity is the decrease in aerobic capacity. During the first week or period of "acute" acclimatization in Mexico City, the maximum aerobic capacity of the athletes was

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USSR

VOLKOV, N. I., et al, Teoriya i Praktika Fizicheskoy Kul'tury, No 7, 1960,
pp 43-48

found to decrease by 19.5% on the average. After two weeks of training the
decrease in maximum O_2 consumption was 14%, a value that closely correlated
with the maximum time of pedaling on the bicycle ergometer.

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UNCLASSIFIED

PROCESSING DATE--03 JUL 70

TITLE--NEW EFFECTSTABILIZERS OF POLYOLEFINS -U-

AUTHOR--ZIMIN, YU.B., LEVIN, P.I., NATVEYENA, E.A., KOZLOVYY, A.A.

SCTRNICKVA, L.N.

COLLCTRY LF INFO--LSSR

SOURCE--PLAST. MASSY 1970, (1), 20-1

DATE PUBLISHED-----70

33
5
36

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--CHEMICAL STABILIZER, POLYETHYLENE, PHOTOCHEMICAL, LIGHT ACTING,
HYDROXYL FATTAL, KETONE, ORGANIC SULFUR COMPOUND, BENZENE DERIVATIVE,
POLYMER/UVIRRNU LAMP, (LIPI2C2GT) POLYETHYLENE, (U)P4020E POLYETHYLENE

CENTRAL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRANT--1980/1685

STEP NC--LR/C191/70/CC0/CC1/CC2C/C021

CIRC ACCESSION NO--APCC45767
UNCLASSIFIED

Acc. No:

NP0049767

Abstracting Service:
CHEMICAL ABST. S-10Ref. Code:
CH 0191

101351g New photostabilizers of polyolefins. Zinain, Yu. B.; Levin, P. I.; Matveeva, E. A.; Kozdoni, A. A.; Sotnikova, L. M. (USSR). Plast. Massy 1970, (1), 20-1 (Russ.). The effects of 2-hydroxy-4-propoxyphenyl thiienyl ketone (I), and 2-hydroxy-4-octyloxyphenyl thiienyl ketone (II) as photostabilizers of low-d. polyethylene P 2020T (III) and high-d. polyethylene P 4020E (IV) were studied. Thus, 0.5-0.66% of I and II were added to III and IV and the polymers were aged under a PRK-2 lamp at 23°. The phys. and mech. properties of stabilized III and IV were unchanged after a 12 month exposure in the air, indicating that I and II were effective photostabilizers comparable to Benzene OA.

CKJR + TAC

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REEL/FRAME
19801685

1/2 022

UNCLASSIFIED

PROCESSING DATE--11/20/73

TITLE--INFLUENCE OF CATALYST RESIDUES ON THE PROPERTIES OF POLYETHYLENE

-U-
AUTHOR-(05)-KRODOVA, N.I., LUGOVA, L.I., MATVEYEV, E.P., KRODOVA, I.M.

PARAMUKOV, YE.YA.

COUNTRY OF INFO--USSR

SOURCE--PLAST. MASSY 1970, (5), 63-4

DATE PUBLISHED-----70

M
SUBJECT AREAS--CHEMISTRY, MATERIALS, PHYSICS

TOPIC TAGS--POLYETHYLENE, CATALYTIC POLYMERIZATION, ALUMINUM OXIDE,
CHROMIUM OXIDE, ELECTRIC PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0921

STEP NO--UR/0191/10/00070053/0154

REF ID: A650
CLASSIFIED

UNCLASSIFIED

PROCESSING DATE--11DEC70

2/2 022
CERC ACCESSION NO--AP0134650
ABSTRACT/EXTRACT--(U) GP-G- ABSTRACT. MEDIUM D. POLYETHYLENE (I) HAS
PREPD. BY USING AL SUB2 O SUB3 CRG SUB3 CATALYST. THE CATALYST WAS NOT
REMOVED FROM I PRIOR TO TESTING AND ITS AMT. WAS APPROX. LETD. FROM THE
AMT. OF ASH IN I. THE INCREASE OF ASH CONTENTS IN I CAUSE DIELEC. PROPS.
0.0C TO 0.03PERCENT DECREASED THE DIION. INDUCTION PERIOD FROM 110 TO 15
MIN. THE ELEC. PROPERTIES OF I (DIELEC. LOSS TANGENT, RESISTANCE)
I BEFORE AGING. HOWEVER, AFTER AGING, DUE TO THE INCREASED NO. OF GJ
AND CO SUB2 H GROUPS IN I WITH HIGH ASH CONTENTS, ITS ELEC. PROPERTIES
WERE NOT SATISFACTORY.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--MECHANISM OF THE LIGHT STABILIZATION OF POLYSTYRENE PLASTICS -U-
AUTHOR--(04)-MATVEYEVA, E.N., KIRILLOVA, E.I., LEITMAN, K.A., LUKOVNIKOV,
A.F.
COUNTRY OF INFO--USSR M
SOURCE--PLAST. MASSY 1970, (5), 60-2
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHOTOLYSIS, CHEMICAL STABILIZER, HYDROXYL RAVALAC, BENZENE
DERIVATIVE, ORGANIC AZOLE COMPOUND, POLYSTYRENE RESIN, PHOTOEFFECT,
ORGANIC NITRILE COMPOUND, AROMATIC KETONE, TAUTOMERISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/0922

STEP NO--UR/0191/70/000700570060/0062

CIRC ACCESSION NO--AP0134651
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

272 025 UNCLASSIFIED
CIRC ACCESSION NO--APOL34651
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT WAS ESTABLISHED THAT THE LIGHT STABILIZER 2,(2,HYDROXY,5,METHYLPHENYL)BENZOTRIAZOLE (I) DOES NOT UNDERGO CHEM. CHANGES OR REACT WITH POLYSTYRENE (II) DURING TREATN., AND DOES NOT REACT WITH THE PRODUCTS OF II PHOTODEGRADATION. THE ABOVE OBSERVATIONS ARE ALSO TRUE FOR THE STABILIZERS RR PRIME1 C:CR PRIME2 CN, 2,HYDROXY,4,HEMOKYBENZOPHENONE, 2:2 PRIME,DIHYDROXY,4,METHOXYBENZOPHENONE, OR 2,4,DIHYDROXYBENZOPHENONE. THESE BENZOPHENONES UNDERGO KETO,ENOL TAUTOMERISM REQUIRING THE ABSORPTION OF LIGHT ENERGY. H-BONDING IS CONSIDERED TO PLAY A ROLE IN THE STABILIZATION MECHANISMS.

UNCLASSIFIED

UDC 632.95

USSR

ANDREYEVA, YE. I., NEL'NIKOV, N. N., PRONCHENKO, T. S., SKALINIKOVA, A. V.,
MATVEYEVA, G. N., OVSISHCHER, M. R., BEZUGLIY, S. F., and USHANOV, N. T.

"Phenothiuran Seed Disinfectant"

V sb. Khim. Sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp 1, Moscow, 1970, pp 135-145 (RZh-Khimiya, No 11, Jun 72, Abstract No 11N429)

Translation: The combination disinfectant phenothiuran (40% tetramethyl-thiuran disulfide, 10% copper trichlorophenoxyde, and 20% γ -hexachlorocyclohexane; heptachlor or some other organochlorine insecticide may be substituted for the last component) has been tested and is recommended for treating cotton seeds (10-12 kg/ton) and the seeds of legume grain crops (3-4 kg/ton). Phenothiuran may also be used to treat seed corn, tree crop seeds, and the planting material for flowers, shrubs and trees. Phenothiuran is moderately toxic and is recommended as a substitute for organomercury disinfectants.

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USSR

M

UDC: 621.315.616.97

MISURKIN, O. G., VITOL, M. P., SHAPOVA, I. R., MATVEYENA, I. A.

"A Compound for Potting Semiconductor Devices"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 19,
1970, Author's Certificate No 272437, filed 14 Jan 69, p 60

Abstract: This author's certificate introduces a compound for potting semiconductor devices based on epoxy resin. As a distinguishing feature of the patent, the moisture-resistant properties of the coating are improved by using boric anhydride as the hardener with the following proportion of components (in parts by weight): epoxy resin--100; boric anhydride--5-10; a filler such as titanium dioxide, red lead or zirconium oxide--15-50; silicon powder--1-5; plasticizers and modifiers such as epoxy resin, polyesters and acrylates--1-20; carbon black--1-3.

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- 349 -

Acc. Nr:

AP0049945Abstracting Service:
CHEMICAL ABST. 5-70

Ref. Code:

UR 0068

101893k Use of clear indene-coumarone resins in corrosion-resistant coatings. Andrianov, E. G.; Marusheva, E.; Gulyaga, V. S. (Zhdanov, Koksokhim. Zavod, Zhdanov, U.S.S.R.). Dokts Khim. 1970, (1), 47-9 (Russ). Mixts. of indene-coumarone resin (I) with ED-6 (epichlorohydrin-diphenylolpropane epoxy resin) gave excellent coatings for metals. The typical coating formulation contained I 22.5, ED-6 22.5, lignoine 47.0, PhMe 4.0, and acetone 4.0 parts. The formulation, with or without a pigment, applied to steel precoated with an antirust compn. (siln. of powd. Zn in 40% H₃PO₄), dried in 24 hr at 20° and had 50 kg/cm impact resistance and satisfactory hardness. The coating resisted the atm. conditions of a coking plant, and resisted aq. 10-15% NaOH at 25-30°, 1-10% NaCNS, 1-10% H₂SO₄, and hot plant water. Less expensive formulations contg. a 2:8 or 3:7 wt. ratio of ED-6 to I can be used in less crit. applications. CPJR

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REEL/FRAME
19801881

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Acc. Nr.: AP0029497

Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 1, pp 31-34

EFFECT OF POLYENIC ANTIBIOTICS ON INCORPORATION OF AMINO ACIDS
TO PROTEINS OF CANDIDA ALBICANSNikiforova, A.A.; Matveyeva, I.M.; Tereshin, I.M.

Leningrad Institute for Antibiotics

The effect of levorin and nistatin on incorporation of amino acids to proteins of Candida albicans was studied. It was found that the above antibiotics suppressed incorporation of alanine and valine to the protein fraction of intact cells of Candida albicans. No effect of levorin and nistatin on protein synthesis was observed in acellular protein-synthesizing systems of Candida albicans. C^{14} -Levorin was detected mainly (up to 84 per cent) in the fraction of cell walls of Candida albicans.

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REEL/FRAME

196B1093

USSR

UDC: 539.216.22:546.289

KLIMENKO, A. P., MATVEYeva, L. A., TKHORIK, Yu. A., CHERNAYA, N. S., Institute of Semiconductors, Academy of Sciences of the UkrSSR

"Investigation of Vacuum Condensates of Germanium on Insulating Substrates"

Kiev, Poluprovodnikovaya Tekhnika i Mikroelektronika, Resp. Mezhved. St., No 7, 1972, pp 41-47

Abstract: A comprehensive study is made of the electric (conductivity and Hall effect over a broad temperature range), optical (infrared spectrum in the 5-15 μ region and the natural absorption edge), surface (stationary and impulse field effects) and structural properties of germanium films on semi-insulating gallium arsenide and ferroelectric $Ba_xSr_{1-x}PbO_3$. An investigation is made of the influence which certain technological factors, the thickness of the film and the type of substrate have on its above mentioned properties. The authors discuss the possibility of existence of an impurity band formed by deep acceptor levels in germanium films.

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1/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--ISOLATION AND PURIFICATION OF SUCCINYL COENZYME A SYNTHETASE FROM
PIGEON BREAST MUSCLE -U-
AUTHOR-(02)-MESHKOVA, N.P., MATYEYeva, L.N.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(6), 1413-16

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--COENZYME, MUSCLE TISSUE, CHEMICAL PURIFICATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605006/E10 STEP NO--UR/0020/T0/191/006/1413/1416

CIRC ACCESSION NO--AT0139807
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0139807
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE ENZYME WAS PURIFIED FORM
PIGEON BREAST MUSCLE, BY REPEATED TREATMENT WITH K PHOSPHATE. THE
PARTLY PURIFIED ENZYME WAS PASSED THROUGH A DAE CELLULOSE COLUMN, THEN
REFRACTIONATED WITH (NH SUB4)SUB2 SO SUB4. THE PROCEDURE RESULTS IN A
400 FOLD PURIFICATION WITH 10PERCENT YIELD.
FACILITY: MOSK.
GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

DYKHNEKO, L. M., KRYUKOVA, N. A., and MATVEYEVA, L. T.

"Device for Transmitting Digital Information from an Electronic Computer to a Controlled Object"

Moscow, Pribory i Tekhnika Eksperimenta, No. 3, 1971, pp 84-86

Abstract: This article describes an instrument capable of receiving a 20-digit parallel potential binary code from an electronic computer, transforming the code into a sequential paraphase pulse code, transmitting this code over a two-conductor coaxial line to a device for transforming the sequential code into a parallel one, and finally transmitting the code to an object controlled by the computer. The instrument has unit time synchronization for realizing the control algorithm, during which it can put out 105 control words containing the three-bit address of the object, the four-bit address of the activating device in the selected object, and a 13-bit information word for the activating device. A block diagram of the whole system is given, plus diagrams of the section for converting the parallel potential code into the pulse paraphase sequential code, and the seven-unit section for information reception and distribution. The components of most of these sections consist of the "Logik" silicon integrated circuits, types ILB 211A-D. Silicon transistors types 2T512A-C are also used.

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1/2 009 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--MANIPULATOR WITH A SYLPHONIC HYDRAULIC DRIVE FOR MICROELECTRODES
-U-
AUTHOR--(03)-MATVEYEVA, M.B., OSIPOVICH, V.V., SHOLOKHOV, V.YU.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGICHESKIY ZHURNAL SSSR IMENI I. N. SIECHENUVA, 1970, VOL 56,
NR 5, PP 797-799
DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--HYDRAULIC ACTUATOR, PLATINUM MICROELECTRODE, METAL SYLPHON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1001

STEP NO--UR/0239/70/056/005/0797/0799

CIRC ACCESSION NO--AP0124660

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0124660
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A HYDRAULIC SYSTEM FOR REMOVAL OF
THE MICROELECTRODES WAS DESCRIBED, WHERE THE SYLPHONS WERE USED INSTEAD
OF CYLINDERS WITH PISTONS AS FUNDAMENTAL DEVICE FOR THE REGULATING AND
EXECUTIVE PARTS. THE SYSTEM WORKS BY APPLYING A PRESSURE TO THE
REGULATING SYLPHON WITH THE AID OF A MICROSCREW. THE PRESSURE IS
TRANSMITTED BY THE HYDRODRIVE TO THE EXECUTIVE SYLPHON WHICH HAS
ELECTRODE HOLDER ATTACHED TO IT. THE ADVANTAGE OF THIS PARTICULAR
DEVICE CONSISTS OF ITS BEING UTTERLY HERMETIC. FACILITY:
INSTITUTE OF PHYSIOLOGY, SIBERIAN BRANCH OF ACADEM. SCI. USSR,
NOVOSIBIRSK.

UNCLASSIFIED

UDC 621.355.8

USSR

DRACHEV, G. G., MATVEYEVA, M. I., and TOMASHEVSKIY, F. V.

"Cobalt as a Trace Element in the Anode Part of Alkali Batteries"

Sb. rabot no khim. istachnikam toka. Vses. n.-n akkumulyator. in-t (Collection of Works on the Chemical Source of Current. All-Union Scientific Study Institute for Storage Batteries) Vyp 7, 1972, pp 118-123 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973, Abstract No 81240 by V. S. Levinson)

Translation: The influence was determined of traces of cobalt in the form of a metallic powder and as different compounds in the positive working terminal on the capacity of alkaline batteries of the type TZHUM-300. The greatest effect was shown by the compound CoSO_4 , in the form of a saturated solution, approximately 3%. Under these conditions, the capacity of the batteries increased approximately 20% with a concomitant improvement in its power at higher temperatures (40°C) for conditions of a small reduction in the discharge current. The actual specific energy of batteries having cobalt additions with unlaminated negative and laminated positive electrodes was 73.5 watt hours/l and 34 watt hours/kg. Such batteries are recommended for application for loading machines.

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USSR

UDC 669.24'26:539.376

MATVEYeva, M. P., and SAMARINA, A. M., Institute of Metallurgy imeni
A. A. Baykov, Academy of Sciences USSR

"Failure of Two-Phase Chromium-Nickel Alloy Due to Creep"

Moscow, Metallovedeniye i termicheskaya obrabotka metallov, No 6, 1972,
pp 58-59

Abstract: Cited here are creep test data on a Cr-Ni alloy (60 and 40%,
respectively). The microstructure of broken specimens tested at 1000°C under
various stresses showed pores, cavities, cracks, and tears. The surface showed
a layer of scale. A specimen of the alloy with an addition of yttrium tested
at 1000°C under 2.5 kg/mm² stress showed greater elongation. The overall
test results of the alloy indicate its low plasticity and low resistance to
creep. The elongation caused by creep is attributed to the inadequate
plastic deformation of one of the phases and, to a greater extent, to the
formation of micropores and cracks propagating slowly at the interphase
boundaries. (3 bibliographic references)

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USSR

UDC 539.4.015

MATVEYEVA, M. P., and CHUYAN, A. M., Moscow

"The Separation of Carbides During High-Temperature Heat and Mechanical Working"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 2, Mar-Apr 71, pp 151-155.

Abstract: The influence of high temperature heat and mechanical working (HFMW) on self-tempering of type 55KhGSFA steel was studied. At optimal HFMW modes, the process of self-tempering of martensite and separation of more dispersed carbides are observed, assuring a high combination of mechanical properties of the steels. These processes doubtless reflect the state of the austenite during the process of HFMW before the martensite conversion. The austenitization temperature, temperature, and degree of deformation of the austenite change the state of the austenite and cause a displacement of the position of the martensite point.

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UDC 539.4.015

USSR

MATVEYEVA, M. P., and CHUYAN, A. M., Moscow

"The Separation of Carbides During High-Temperature Heat and Mechanical Working"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 2, Mar-Apr 71, pp 151-155.

Abstract: The influence of high temperature heat and mechanical working (HFMW) on self-tempering of type 55KhGSFA steel was studied. At optimal HFMW modes, the process of self-tempering of martensite and separation of more dispersed carbides are observed, assuring a high combination of mechanical properties of the steels. These processes doubtless reflect the state of the austenite during the process of HFMW before the martensite conversion. The austenitization temperature, temperature, and degree of deformation of the austenite change the state of the austenite and cause a displacement of the position of the martensite point.

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- 68 -

USSR.

UDC 669.21/23:669.231+669.716

LATYPOVA, I. M., VOLKOVA, R. M., and NATVIGINA, N. P., Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences USSR, Moscow

"Oxidizability of Platinum and Beryllium Alloys"

Abstract: The purpose of this article is to fill, at least partially, the gap in information concerning the oxidation of platinum containing small additions of different elements. Such information is important because low-alloyed platinum is used in the manufacture of refractory materials. The paper describes research on the kinetics of oxidation and on the composition of platinum beryllium oxide films with small additions of beryllium -- 0.02, 0.04, 0.06, 0.08, and 0.1% -- to the alloy. The original material of which the alloy was made consisted of 99.96% technical platinum and 0.04% metallic beryllium. Melted in an arc furnace with a tungsten electrode on a copper, water-cooled sole in an atmosphere of purified helium, the alloys were cast in ingots weighing 60 grams. After repeated remelts, for the purpose of equalizing the composition, the castings were furnace cooled. They were then annealed at 1200°C for two hours, and rolled into sheets 1 mm thick. The specimens were cut into plates measuring 20 x 30 mm, and oxidized in air at 1000°C.

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USSR

LATYPOVA, I. M., et al., *Viziko-Khimicheskaya Mekhanika Materialov*,
Col 6, No 5, 1970, pp 28-30

The electronographic method was used to measure the phase composition of the platinum alloys. Measurement results and results from the literature are compared. The experiments showed that in the oxidation of platinum containing 0.06, 0.08, or 0.15 Be, the surface formation consisted mainly of BeO.

2/2

UIC 549.2.004.12:541.6.004

USSR

KORNILOV, I. I., Doctor of Chemical Sciences, Professor, ~~NATVEYEV~~, N. M.
Candidate of Technical Sciences (editors)

Metallidy -- Stroyenje, Svoystva, Primeneniye (Metallides -- Structure, Properties, Application), Moscow, Nauka Press, 1971, 167 pages

Translation of Foreword: The work in studying metal-metallide compounds has recently come to be broadly developed. It has significance in inorganic chemistry, the chemistry of metals, physical metallurgy, and the physics of metals. It is of great practical interest in connection with the fact that metallides have special physical, mechanical, and other properties.

It must be noted, for example, that such compounds as V_{Au_4} , $ZrZn_2$, and $ScIn$ having ferromagnetic properties are formed from nonferromagnetic components, and the ternary metallide $Nb_3(AlGe)$ of exact stoichiometric composition has a critical temperature of transition to the superconducting state above the temperature of liquid hydrogen. Many compounds of metals with semimetals and nonmetals, as is known, are classified as semiconducting compounds.

In June 1968, at the Metallurgy Institute of the USSR Academy of Sciences a symposium was held in honor of the 100th anniversary of the discovery of the critical points of iron by the famous Russian scientist and metallurgist D. K. Chernov.

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KORNILOV, I. I., et al., Metallidy -- Svoystva, Primenenie, Moscow, Nauka Press, 1971, 167 pages

In one section of the symposium a study was made of the problems of the structure, properties, and application of metallides. A significant part of the reports presented were published in the works of the symposium (in the collection Metallovedenie. Materialy simpoziuma, posvashchennogo 100-letiyu okrytiya D. K. Chernovym polimorfizma zheleza (Physical Metallurgy. Materials of the Symposium devoted to the 100th Anniversary of the Discovery of the Polymorphism of Iron by D. K. Chernov), Nauka Press, 1971). However, in view of the limited volume of the indicated collection not all of the papers were included although many were of interest from the point of view of the modern state of the art in research in the field of metal compounds of various types. Accordingly, it was considered expedient to publish a supplementary collection.

This collection contains survey reports on many classes of metallides: Kurnakov compounds, chalcogenides, antimonides, and arsenides, phosphides and nitrides, carbides and silicides, and so on. A large group of reports deals with the problems of suboxides — the lowest metal oxides.

In the opinion of the people who compiled this collection, it will be of interest to many inorganic chemists, physical chemists, physical metallurgists and metallurgists, specialists in the physics of metals and the chemistry of metals, students and graduate students in these branches of science and also all specialists interested in the problems of metallides and their practical application.

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KORNILOV, I. I., et al., Metallidy -- Stroyeniye, Svoystva, Primeneniye, Moscow,
Nauka Press, 1971, 167 pages

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KORNILOV, I. I., et al., Metallidy -- Stroyeniye, Svoystva, Primeneniye, Moscow,
Nauka Press, 1971, 167 pages

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KORNILOV, I. I., et al., Metallidv -- Stroeniy, Svaystva, Primeneniye, Moscow,
Nauka Press, 1971, 167 pages

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USSR

WDC 622.011.43

MATVEYEVA, N. N., and YEGOROVA, L. V."Concerning a Class of Laws of Change of the Velocity $v(x,z)$ "

Leningrad, Vopr. Dinamich. Teorii Rasprostr. Seismich. Voln -- Sbornik (questions of the Dynamic Theory of the Propagation of Seismic Waves -- Collection of Works), Naika, No 11, 1971, pp 72-79 (from Referativnyj Zhurnal, Mekhanika, No 2, Feb 72, Abstract No 2V869 by A. A. Gvondrev)

Translation: Attention is directed to the fact that the equation of an eikonal can be solved in quadratures in the case where the wave-propagation rate in Cartesian coordinates x and z is given in the form of $v(x,z) = [f(x) + i\psi(z)]^{1/2}$. Analogously, in the spherical coordinates, r , theta the solution in quadratures is obtained when

The above-noted circumstance is used for obtaining simple formulas for the waverange times and for the immersion depth of the rays for two particular cases;

$$\begin{aligned}\psi(\theta) &= 1/v_0^2(1+\epsilon z)^{1/2} \text{ when } f(x) = cx/v_0^2 \\ \psi(r) &= R^2(r/R)^{1/(k+1)}/v_0^2 \text{ when } f(\theta) = R\epsilon\theta/v_0^2\end{aligned}$$

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USSR

UDC: 532.516.2

MATVEYEVA, N. S., NEYLAND, V. Ya.

"Intense Blowing on a Body of Finite Length in a Supersonic Flow"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamics Institute), 1970, 1, No 5, pp 13-28 (from RZh-Mekhanika, No 7, Jul 71, Abstract No 7B713)

Translation: The method of asymptotic decompositions is used to study effects which arise in various regions of flow around a plate of finite length in the case of intense blowing of gas across a body in a supersonic streamline flow. It is shown that under certain conditions, the influence of perturbations on the trailing end of the body propagates to the forward end. Asymptotic representations are constructed for typical regions of flow on a plate or on a wedge for power and uniform distribution of the blowing velocity along the body. Ye. N. Bondarev.

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1/2 010 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--B, D FRAGMENT FORMED DURING THE SPLITTING OF PEPSIN BY CYANOGEN
BROMIDE -U-
AUTHOR-(04)-SUFKOVA, I.A., ARIKHANYAN, M.M., BATYENEVA, R.A., STEPANOV,
V.M.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PRIR. SOEOIN, 1979, 6(1), 144

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PEPSIN, FRACTIONATION, CYANOGEN COMPOUND, BROMIDE, AMINO ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0563

STEP NO--UR703937767006700170144/0144

CIRC ACCESSION NO--AP0131186

EXPIRATION DATE

2/2 010

UNCLASSIFIED

PROCESSING DATE--16NOV70

CIRG ACCESSION NO--APO131166

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. B-5 FRAGMENT OF PEPSIN, REPRESENTING THE CENTRAL PART OF ITS MOI, AND ATTACHED TO THE N-TERMINAL B-2 FRAGMENT OF THE ENZYME, WAS COMPOSED OF 40-E AMINO ACIDS. ITS STRUCTURE WAS AS FOLLOWS: ASP-GLY-GLU-THR-LLE-(THR, GLY, SER, ALA)-.....-LEU-THR-GLY-PRO-THR-SER-ALA-...-(SER, AL, ILE)-MET.

FACILITY: INST. KHM. PRIR. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED//
100

1/2 021 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--INTEGRAL FREE ENTHALPIES AND ENTROPIES OF DISSOLUTION IN A SODIUM
HYDROXIDE AND WATER SYSTEM -U-
AUTHOR-(02)-PUCHKOV, L.V., MATVEYEVA, R.P.

M

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHM. 1970, 44(2), 335-40

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--BINARY FLUID SYSTEM, AQUEOUS SOLUTION, SODIUM HYDROXIDE,
ENTROPY, HEAT OF SOLUTION, FREE ENERGY, CRYSTAL HYDRATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0861

STEP NO--UR/0076/T0/044/002/0335/0340

CIRC ACCESSION NO--AP0104297

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--02 OCT 70

CIRC ACCESSION NO--AP0104297

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VALUES OF INTEGRAL ENTHALPY, DELTA H PRIMEM, ENTROPY, DELTA S PRIMEM, AND FREE ENTHALPY, DELTA G PRIMEM, OF DISSOLN. FOR THE SYSTEM, NAOH-H SUB2 O, WERE CALCD. AT 25-322DEGREES AND OVER A BROAD CONCN. RANGE. A COMPARISON OF THE TEMP. AND CONCN. DEPENDENCY OF DELTA H PRIMEM AND DELTA S PRIMEM ON THE FUNCTIONS REPRESENTING THE 2ND DERIVS. OF DELTA G PRIMEM POINTS TO A CHANGE IN THE CHARACTER OF SOLVATION IN DIL. SOLNS. WITH INCREASING TEMP. THE STRUCTURES FORMED DURING MELTING OF CRYST. HYDRATE, PRESENT IN CONCD. SOLNS., ALSO REMAIN STABLE AT HIGH TEMPS.

USSR

UDC 616.938.75-06;616.961.232-097.5

POKROVSKIY, V. I., SACHEV, V. I., MATVEYEVA, S. M., VERNENOV, Yu. Yu., GROMOGLASOVA, Ye. V., and MARKOVA, N. V., Moscow Medical Stomatological Institute

"Group-Specific Antimeningococcus Antibodies in Various Forms of Meningococcus Infection in the Presence of Influenza Viruses"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 11, 1972,
pp 115-120

Abstract: Circulating antimeningococcus group-specific antibodies the formation of which was triggered by meningococcus infection were studied. The precipitation method which included the diffusion of antigens, antibodies, and their complexes through a membrane was used. The blood sera of individuals without any contact with meningococcus infection contained in average $370 \mu\text{g}$ /ml antigen-antibody complex/ml, and it increased to $590 \mu\text{g}$ /ml for the medical personnel who had contact with patients carrying meningococcus infection. The titer of antibodies in patients with pure meningitis was 920, 830, and $890 \text{ Zt}/\text{ml}$ of blood serum during the first day in hospital, in 5-6 days, and at the end of hospitalization, respectively. Patients in whom meningitis was combined with meningococcemia carried 730 , 623 , and $502 \mu\text{g}$ antibodies/ml of blood serum tested during the same periods. When the meningococcemia was prevalent, the

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POKROVSKIY, V. I., et al., Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 11, 1972, pp 115-120

number of antibodies was 630, 553, and 510 μ g/ml during respective periods. The serologically detected influenza virus Hong Kong A2 produced the sub-clinical form of the meningococcus infection and increase the number of the infection carriers. Increase in the antibody titer toward influenza A2 viruses in patients with the meningococcus infection was, probably, the additional sensitizing factor which led to hyperergia and meningococcemia. This was accompanied by a decrease in the number of the antimeningococcus antibodies and by titer increases of the antiviral antibodies. The immunological process in the case of meningococcus infection combined with respiratory viral infection produced conditions favorable for anaphylactic reactions.

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1/4 021

UNCLASSIFIED

PROCESSING DATE---20NOV70

TITLE--THE COSTS OF CREDULITY -U-

AUTHOR-(02)-BOGMA, A., MATVEYEVA, T.

CCOUNTRY OF INFO—LSSR

SOURCE—PRAVCA, MAY 17, P. 2. 1,600 WORDS

DATE PUBLISHED--17MAY70

M

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS—ACADEMIC INSTITUTION ADMINISTRATION, ACADEMIC PERSONNEL,
PERSONNEL SELECTION, PERSONNEL MANAGEMENT, POLITICAL SYSTEM, SUPERVISORY
CNTRL

CNTRL MARKING—NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/0531

STEP NO--UR/90127707000/0007000270002

CIRC ACCESSION NO--ANO122658

2/4 021 UNCLASSIFIED PROCESSING DATE--20NJV70
CIRC ACCESSION NO--AN0122658

ABSTRACT/EXTRACT--(U) CP-0- ABSTRACT. THERE MAY SEEM NO SENSE IN PICKING UP A TALE THAT IS SUPPOSED TO HAVE BEEN FINISHED. THE PROBLEM WAS DNESSA UNIVERSITY AND THE UNUSUAL SITUATION THAT DEVELOPED IN ITS COLLECTIVE. INDEED, IT WOULD APPEAR THAT THE SOURCES THAT LONG UNSETLED THE UNIVERSITY HAVE BEEN ELIMINATED: RECTOR A. I. YURZHENKO HAS BEEN REMOVE FROM HIS JOB. BUT WAS HE THE ONLY TROUBLE? COMMUNISTS TACTFULLY POINTED OUT THE LACK OF MODESTY TO THE RECTOR. HE DID NOT TAKE HIS COMRADES' ADVICE TO HEART, HOWEVER. IN ADDITION, IN A CLEAR ATTEMPT TO MUSTER SUPPORT, HE OPENED WIDE THE INSTITUTION'S DOORS TO PEOPLE FROM HIS OWN AREA, TO FRIENDS AND ACQUAINTANCES. A GROUP OF "PERSONAL STUDENTS" CAME IN FROM LVOV, WHERE HE HAD WORKED EARLIER. SOME OF THEM, TO PUT IT MILDLY, HAD UNDISTINGUISHED REPUTATIONS. INTERVENTION BY THE DNESSA PARTY PROVINCE PARTY COMMITTEE CAME AT THIS POINT. ITS BUREAU HAD SIX YEARS EARLIER REBUKED A. YURZHENKO FOR AN IMPROPER APPROACH TO THE SELECTION OF SCIENTIFIC AND PEDAGOGICAL PERSONNEL. THAT HAD NOT TAUGHT HIM MUCH, AS TIME HAD SHOWN. OF COURSE, THERE WERE GOOD INSTRUCTORS AMONG THOSE BROUGHT IN FROM OTHER CITIES. BUT MOST OF THE NEW PEOPLE WERE CHOSEN TO MAKE A NUCLEUS OF STAFF DEPENDENT ON THE RECTOR. THE RECTOR ARBITRARILY MADE THESE PEOPLE MEMBERS OF THE ACADEMIC COUNCILS AND HEADS OF DIVISIONS AND EVEN OF DEPARTMENTS. THEY RETURNED THE FAVOR WITH SERVILE AND UNCONDITIONAL SUPPORT FOR HIM. RECENT YEARS HAVE SEEN NEW SCIENTIFIC SUBDIVISIONS CREATED AT THE UNIVERSITY; EQUIPMENT HAS BEEN AUGMENTED; AND THE ACADEMIC COUNCILS HAVE BEEN GIVEN THE RIGHT TO HEAR THE DEFENSE OF DISSERTATIONS.

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3/4 021

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AN0122658

ABSTRACT/EXTRACT--THIS HAS BEEN USED BY THE GROUP AROUND THE RECTOR TO PUSH THEIR OWN RELATIVES AND FRIENDS INTO THE RANKS OF "SCHOLARS," CASES OF PROFESSORS' AND DOCTORS' WIVES WRITING DISSERTATIONS UNDER THE GUICANCE OF THEIR HUSBANDS AND SUCCESSFULLY DEFENDING THEM IN THEIR "OWN" DEPARTMENTS BECAME FREQUENT. THIS COULD NOT HELP BUT UPSET THE PARTY ORGANIZATION. THE PARTY COMMITTEE MORE THAN ONCE RAISED SHARP QUESTIONS OF PRINCIPLE CONCERNING THE SELECTION AND PLACEMENT OF PERSONNEL. THE RECTOR SOMETIMES AGREED WITH THE CHARGES; MOST OFTEN HE WOULD CHARACTERIZE THEM AS INFRINGING THE PRINCIPLE OF SINGLE LEADERSHIP. WHEN THE PARTY ORGANIZATION WAS ADAMANT IN TRYING TO BAR THE UNIVERSITY TO UNWORTHY PERSONS, A. YURZHENKO TRIED IN EVERY QUARTER TO DEFAME PARTY COMMITTEE SECRETARY L. KALUSYAN. AS IS KNOWN, THERE IS AN ATMOSPHERE OF PARTY STRICTNESS AND PRINCIPLEDNESS WHEREVER CRITICISM AND SELF-CRITICISM ARE DEVELOPED AND FOSTERED. YET AT ODESSA UNIVERSITY THE RECTOR DID ALL HE COULD TO STIFLE THIS. HIS CHIEF WEAPONS WERE HIS ADMINISTRATIVE RIGHTS.... CONSEQUENTLY, THE NUMBER OF COMMUNIST INSTRUCTORS AT THE UNIVERSITY HAS DROPPED CONSIDERABLY. THERE ARE LESS THAN ONE-QUARTER OF COMMUNIST STAFF TO TOTAL STAFF IN SEVERAL DEPARTMENTS. NINE DIVISIONS HAVE NO COMMUNISTS. EARLY LAST YEAR THE BUREAU OF THE ODESSA PROVINCE PARTY COMMITTEE TOOK AN INTEREST IN THE UNIVERSITY WITH A VIEW TO CHECKING ON THE ENFORCEMENT OF THE DECISION OF THE UKRAINE COMMUNIST PARTY CENTRAL COMMITTEE.

UNCLASSIFIED

4/4 021 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AN0122658

ABSTRACT/EXTRACT--A PROVINCE PARTY COMMISSION OF RECTORS AND PROFESSORS IN HIGHER EDUCATIONAL INSTITUTIONS CONCLUDED: "YURIMENKO DOES NOT PROPERLY UNDERSTAND THE COMBINATION OF THE PRINCIPLES OF ONE-MAN DIRECTION AND COLLECTIVE LEADERSHIP. TAKING INTO ACCOUNT THE ENTIRE SITUATION AT ODESSA UNIVERSITY, THE COMMISSION CONSIDERS IT ADVISABLE AND EXTREMELY NECESSARY THAT SUPERIOR PARTY AGENCIES INTERVENE IMMEDIATELY AND DRASTICALLY". AN ATTEMPT WAS MADE TO CONVINCE US THAT A CHANGE IN THE UNIVERSITY LEADERSHIP HAD IN ITSELF FULLY SOLVED THE ACUTE PROBLEM. BUT WITH THE PASSAGE OF TIME THE FEARS OF THE UNIVERSITY COMMUNISTS HAVE BEEN CONFIRMED THAT THE QUIET TRANSFER OF A. YURZHENKO COULD NOT CURE THE SITUATION IN THE COLLECTIVE. THIS IS TO BE SEEN IN THE FORMER RECTOR'S IMPROPER BEHAVIOR AS A DIVISION HEAD: HIS OPEN HOSTILITY TO THE NEW RECTOR, PROF. A. V. BOGATSKY; HIS ATTEMPTS TO RALLY A GROUP OF HIS OWN SUPPORTERS IN THE CHEMISTRY DEPARTMENT AND COUNTERPOSE THEM TO THE PARTY BUREAU: AND SO ON.

UNCLASSIFIED

USSR

UDC 616-003.921.1.04-07:616.8-091.81-07

BOGOLEPOV, N. N., NATSEYEV, T. S., DOVEDOVA, Ye. L., and VOROB'YEVA, T. V.,
Brain Institute, Academy of Medical Sciences USSR, Moscow

"Ultrastructural Changes in Nerve Cells Induced by Hypoxia"

Moscow, Zhurnal Nevropatologii i Psichiatrii, No 12, 1972, pp 1819-1827

Abstract: Optical microscopic examination of cortical neurons in rats exposed to hypoxia for varying periods revealed a great variety of morphological changes ranging from physiological activation to ischemia, karyoautolysis, and disappearance of whole groups of cells. Electron microscopy showed four types of ultrastructural changes, the severity varying with the duration of hypoxia: (a) presence of "dark" osmophilic cells with increased electron density of the cytoplasm; (b) presence of cells with an increased number of lysosomes and dark osmophilic granules; (c) various changes in the mitochondria; (d) changes typical of retrograde degeneration, i.e., shifting of the nucleus to the periphery, decrease in number of elements of granular reticular, swollen mitochondria lacking in cristae. The associated biochemical changes were marked chiefly by the decreased activity of the oxidation enzymes. The data are analyzed from the standpoint of the mechanisms of the destructive and compensatory processes in the cerebral cortex during hypoxia.

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USSR

UDC 620.193.196:669.295

TOMASHOV, N. D., MATVEYeva, T. V. and IVANOV, YU. M., Institute of Physical Chemistry, Academy of Sciences USSR

"Effect of Ruthenium on the Corrosion Behavior of Titanium"

Moscow, Zashchita metallov, Vol 8, No 2, Mar-Apr 72, pp 174-177

Abstract: This paper deals with the effect of ruthenium on the passivation and corrosion resistance of titanium as compared to the passivation effectiveness of palladium. The marked difference between the corrosion behavior of Ti alloys with Ru and Pd is explained by the difference of hydrogenation and cathodic polarization. Added in small amounts to Ti, Ru hydrogenates to a lesser degree than Pd and is therefore a more effective cathode capable of converting Ti to the passive state. It is essential that unlike Pd, even minimal Ru additions (0.01 - 0.05%), while insufficient to

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USSR

TOMASHOV, N. D., et al, Zashchita metallov, Vol 8, No 2, Mar-Apr 72
pp 174-177

provide complete passivation of the alloy, will not increase its corrosion rate as compared to pure Ti. At higher contents (above 0.1%) the difference in the cathodic effects of Ru and Pd levels off. It appears that Ti alloys inoculated with very small amounts of Ru (0.05 - 0.1%) may be of practical interest under certain corrosion conditions (4 illustr., 12 bibli. ref)

2/2

1/2 030

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--EFFECT OF THE VOLUME OF A SOLUTION AND THE PRESENCE OF OXYGEN AND
TITANYL IONS IN IT ON THE CORROSION OF TITANIUM PALLADIUM AND TITANIUM
AUTHOR--(03)-TOMASHOV, N.D., CHERNOVA, G.P., MATVEYEVA, T.V.

COUNTRY OF INFO--USSR

M

SOURCE--ZASHCH. METAL. 1970, 6(2), 145-50

DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR., MATERIALS

TOPIC TAGS--TITANIUM ALLOY, RUTHENIUM ALLOY, PALLADIUM ALLOY, METAL
CORROSION, OXYGEN, ION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1912

STEP NO--UR/0365/70/006/002/0145/0150

CIRC ACCESSION NO--AP0118874

UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--23 OCT 70

CIRC ACCESSION NO--AP0116874

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE ON THE EFFECT OF THE SOLN. VOL. TO SURFACE AREA RATIO, CHANGE OF SOLN., ATM. CONCP., AND Ti PRIME4POSITIVE ADDN. ON THE CORROSION OF Ti-PD AND Ti-RU ALLOYS. IN H SUB2 SO SUB4 AND HCL SOLNS. AT ROOM TEMP., Ti-0.2PERCENT PD AND Ti-(0.2-0.5PERCENT) RU ALLOYS IN AN ATM OF N MAINTAIN THE POTENTIAL OF THE ACTIVE PASSIVE STATE AND CORRODE AT A HIGHER RATE THAN IN AN AIR ATM OR IN THE PRESENCE OF Ti IONS IN THE SOLN.. THE Ti IONS PROMOTING SELF PASSIVATION. CONSEQUENTLY EVEN IN THE PRESENCE OF CATHODIC ADDITIVES THE PROCESS OF H ION DISCHARGE CAN IN SOME CASES BE INSUFFICIENT TO SHIFT THE ALLOY POTENTIAL INTO THE REGION OF Ti PASSIVATION. ONLY THE INTRODUCTION OF ADDNL. OXIDIZERS (O SUB2, TiO PRIME2POSITIVE) LEADS TO SELF PASSIVATION OF THE ALLOYS. ALTHOUGH Ti IONS HAVE A LESS POS. REDOX POTENTIAL THAN O, THEY ARE MORE SOL. AND WHEN THEY ACCUMULATE IN THE SOLN., THEY ACT AS ACCUMULATORS AND CARRIERS OF THE OXIDIZING FUNCTIONS OF DISSOLVED OXYGEN FROM THE BULK OF THE SOLN. TO THE CORRODING SURFACE. ON INCREASING THE RATIO OF SOLN. VOL. TO THE SURFACE AREA OF THE SPECIMEN OR ON PERIODICALLY CHANGING THE SOLN., THE CORROSION RATE OF Ti AND ITS ALLOYS WITH PD CAN INCREASE NOTABLY, DUE NOT TO THE DECREASE IN THE PD ION CONCN. IN SOLN. BUT TO THE TITANYL ION CONCN. WHICH ARE SUPPLEMENTARY OXIDIZERS. FACILITY: INST. FIZ. KHM. + MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 620.193.01

TOMASHOV, N. D., CHERNOVA, G. P., and MATVEYeva, T. V., Institute of Physical Chemistry, Academy of Sciences, USSR

"Effect of the Volume of the Solution and the Presence of Oxygen and Titanyl Ions in It on the Corrosion of Titanium-Palladium and Titanium-Ruthenium Alloys"

Moscow, Zashchita Metallov, Vol 6, No 2, Mar-Apr 70, pp 145-150

Abstract: The corrosion of Ti-Pd and Ti-Ru alloys may increase with continuous regeneration of the corrosion solution (boiling 5% HCl), as well as in an inert atmosphere (nitrogen) over the solution (5--20% HCl, 10--40% H₂SO₄, 25°C). This is attributed to the fact that the process of discharge of hydrogen ions may be inadequate to shift the alloy's potential to the passivation region. The addition of oxidizers (O₂, TiO²⁺) will result in self-passivation of the alloy. Titanylions, though they have a redox-potential less positive than that of oxygen, are more soluble and, on accumulation in the solution, serve as transfer agents of the oxidizing functions of dissolved oxygen from the volume of the solution to the corroding surface. As the solution volume-to-specimen surface ratio is increased, or as the solution is periodically replaced, the corrosion rate of titanium and titanium-palladium alloys in acid (HCl) may considerably increase. This is ascribed not to a reduced concentration of palladium ions in solution, but to a lower concentration of titanyl ions, the latter being the additional oxidizer.

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USSR

BAZHANOV, N. P., LOSEV, A. M., and MATVEYEVA, Ye. N.

"An Investigation Into the Depth and Quality of Document Indexing in the
'PIR-2' Automated Information Retrieval System"

Moscow, Nauchno-Tekhnicheskaya Informatsiya - Seriya 2: Informatsionnye
Protsessy i Sistemy, September 1972, pp 19-22

Abstract: Statistical characteristics of document search patterns were investigated. A generalized statistical document search pattern was derived from an analysis of a statistical collection of document search patterns carried out by eight specialists on the subject.

The study was predicated on two assumptions: first, that indexing depth characterizes indexing quality and that statistical document search patterns describe document primary subject matter with sufficient accuracy and completeness; and second, that if in comparing a generalized document search pattern with a generalized statistical document search pattern the former is found to have the higher quantitative indices, then the quality of indexing done by information officers is not inferior to that done by the subject specialists.

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USSR

BAZHANOV, N. P., et al., Nauchno-Tekhnicheskaya Informatsiya - Seriya 2:
Informatsionnyye Protsessy i Sistemy, September 1972, pp 19-22

The indexing quality W_1 is measured by the mathematical expectation; and indexing inconsistency (nonsequential indexing), by the standard deviation σ_1 . For the "PIR-2" computer-based system, $W_1 = 90\%$ and $\sigma_1 = 9\%$.

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USSR

UDC 678.048

MIKHAYLOV, V. V., KOKHANOV, YU. V., KAZARYAN, K. S., MATVEYEVA, YE. N.,
and KOZODOY, A. A.

"Metal Dialkyldithiophosphates -- Stabilizers of Polymeric Materials"
Moscow, Plasticheskiye Massy, No 9, 1970, pp 23-24

Abstract: Various metal salts of the dodecyl ester of dithiophosphoric acid were studied as light and thermal stabilizers for polyamides and polyolefines: zinc, nickel, copper, and chromium salts. Comparison of the rate of oxygen consumption at 200°C and 200 mm Hg of the polymers PA-68 and PA-12, to which these salts were added, using a proven stabilizer N,N'-di- β -naphtyl-p-phenylenediamine (DNPDA) as control, showed that the nickel salt of PA-68 and the copper salt of PA-12 surpass the DNPDA. Both of these compounds leave the polymer colorless, in contrast to DNPDA. The copper and nickel salts show good synergistic activity as light stabilizers for polyolefines when mixed with 2-hydroxy-4-alkoxybenzophenone (benzone OA).

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UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--AGING OF REPEATEDLY REWORKED POLYPROPYLENE -U-

AUTHOR--(05)-SHISHOVA, I.S., UTYUGOVA, M.R., YUZHEN, V.M., MATVEYEVA,
YE.N., SEMENSOV, A.D.
COUNTRY OF INFO--USSR

SOURCE--PLAST. MASSY 1970, (3), 39-40

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYPROPYLENE, PLASTIC INJECTION MOLDING, CHEMICAL STABILIZER,
PHENYLENE, DIAMINE, ORGANIC SULFUR COMPOUND, PROPIONATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1377

STEP NO--UR/0191/T0/000/003/0039/0040

CIRC ACCESSION NO--AP0128777

UNCLASSIFIED

2/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0128777
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHYSICOCHM. CHANGES OCCURRING
IN POLYPROPYLENE (I) DURING REPEATED INJECTION MOLDING AND THE
EFFECTIVENESS OF STABILIZERS WERE INVESTIGATED. REPEATED INJECTION
MOLDING AFFECTED ONLY THE MELT INDEX, BUT NOT THE MECH. PROPERTIES OF I.
THE MOST EFFECTIVE STABILIZER SYSTEM WAS TOPANOL SA WITH DILAURYL
THICLIPROPICNATE, WHEREAS MOLDED I ARTICLES WERE BEST STABILIZED WITH N,
N¹,DI,BETA,NAPHTHYL,P,PHENYLENEDIAMINE.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--ACTION OF NATURAL LIGHT ON PLASTIC SCINTILLATORS -U-

AUTHOR--(OSI)--GGLUTVINA, I.G., ZHILTSOVA, L.YA., MATVEYEV, YE.N., MEDVEDEV,
M.N., RUBINA, O.G.
COUNTRY OF INFO--USSR

SOURCE--PRIB. TEKH. EKSP. 1970, 1, 88-9

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--POLYSTYRENE RESIN, SCINTILLATOR, LUMINESCENCE, LIGHT AGING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1150

STEP NO--UR/0120/00/001/000/0088/0089

CIRC ACCESSION NO--AP0128572

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128572

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF A 10 YR LONG
EXPOSURE TO LIGHT OF POLYSTYRENE, RELEASED 2PERCENT P_1 -TERPHENYL, FILLED
SCINTILLATORS WAS INVESTIGATED. THE QUANTUM YIELD OF LUMINESCENCE WAS
REDUCED BY 50PERCENT IN THE SURFACE LAYERS OF THE SPECIMENS. NO EFFECT
ON THE LUMINESCENCE LIFETIMES WAS FOUND.
FACILITY: OBEDIN.
INST. YAD. ISSLED., DUBNA, USSR.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--30DCT70
TITLE--MECHANICAL QUENCHING OF THE LIGHT YIELD OF LIQUID SCINTILLATORS -U-

AUTHOR--(04)-ZEMSKOVA, I.I., ZHILTSOVA, L.YA., MATVEYEVA, YE.N., TYMINSKIY,
V.G.

COUNTRY OF INFO--USSR

SOURCE--PRIB. TEKH. EKSP. 1970, 1, 83-4

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--FLUID SCINTILLATION, LUMINESCENCE QUENCHING, QUANTUM YIELD,
IRON POWDER, TOLUENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0538

STEP NO--UR/0120/70/001/000/0083/0084

CIRC ACCESSION NO--APO117768

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0117768

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DATA ARE GIVEN FOR DETN. OF QUENCHING FLASHES OF A LIQ. SCINTILLATOR BASED ON TICLUENE BY POWD. FE AND CU. IF N IS THE NO. OF READINGS IN A GIVEN TIME AND C IS THE CONCN. OF THE QUENCHING MATERIAL, IT IS POSSIBLE TO DERIVE AN EQUATION C EQUALS C SUB ONE HALF IN (N SUB0-N)-0.693, WHERE C SUB ONE HALF IS THAT CONCN. OF THE QUENCHING MATERIAL AT WHICH THE LUMINESCENCE YIELD DIMINISHES TO HALF OF THE INITIAL VALUE, AND N SUB0 IS THE NO. OF READINGS WITHOUT THE QUENCHING MATERIAL. COMPARISON OF THE LIGHT YIELD OF A STD. LIQ. SCINTILLATOR WITH THAT OF A CONTAMINATED ONE PERMITS TO DET. THE AMT. OF QUENCHING MATERIAL PRESENT WITH AN ACCURACY OF SIMILAR TO 10 PRIME NEGATIVES G. FACILITY: OB'EDIN. INST. YAO, ISSLED., DUBNA, USSR.

UNCLASSIFIED

USSR

M UDC: 581.2
RUBIN, B.A., GUZHOVA, N.V., KARTASHOVA, YE. R., ANDREYCHUK, T.V., and MATVEYEVA,
YE.S., Moscow State University imeni M.V. Lomonosov.

"Oxidative Apparatus of the Agent of Cotton Wilt (*Fusarium oxysporum vasinfectum*)
of Different Pathogenicity"

Moscow, Doklady Akademii Nauk SSSR, Vol 191, No 2, Mar/70, pp 483-486

Abstract: Concurrent experiments and analytical observations on two strains of *Fusarium oxysporum vasinfectum*, the virulent FV-15 strain, and the avirulent FA-61 strain, show that the catalytic and cytochrome oxidase processes in mycelia of these fungi are localized in the structural elements in a manner similar to that in higher plants. But the intensity of any particular function or enzymatic activity in the two strains is not alike. Both catalysis and cytochrome oxidase activity in FV-15 are much higher than in FA-61. The content of protoporphyrin correlates with the activity of porphyrin enzymes: these are higher in FV-15, indicating a much higher intensity in the porphyrin-mycelium exchange. Generally, the differences, concerning all phases of oxidative and metabolic processes, have a definite influence on the pathogenicity of the fungus. The degree of pathogenicity is correlated positively with the intensity of metabolic activity.

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1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--VINYLAZO ALKANES AND THEIR REACTION WITH METHYL VINYL KETONE -U-
AUTHOR-(03)-ZELENIN, K.N., MATVEYEVA, Z.M., YERMOLAYEV, L.YU.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 723-7

DATE PUBLISHED---70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AZO COMPOUND, ALKANE, ALIPHATIC KETONE, CHROMATOGRAPHIC
SEPARATION, CONDENSATION REACTION, EPR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1964

STEP NU--UR/0366/70/006/004/0723/0727

ACCESSION NO--A00129503

REF ID: A65160

2/2 009

UNCLASSIFIED

PROCESSING DATE--30 OCT 70

CIRC ACCESSION NO--AP0125553

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDENSATION OF H SUB2 C:CHN:NR (R IS ME, ET, PR, OR ISO-PR) WITH H SUB2 C:CHC(=O)ME GAVE MIXTS. OF I,(R,SUBSTITUTED),5,ACETYL,DELTA PRIME2,TETRAHYDROPYRIDAZINE (I) WITH ITS 6,ACETYL ANALOGS (II). THE MIXTS. WERE SEPD. BY GAS CHROMATOG.; I AND II WERE IDENTIFIED BY EPR SPECTROSCOPY. THE RELATIVE AMTS. OF I AND II DEPEND ON R; MORE BULKY R DECREASE THE AMT. OF II IN PRODUCTS.

FACILITY: VUENNO-MED. AKAD. IM. KIROVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 008

UNCLASSIFIED

PROCESSING DATE--30 OCT 70

TITLE--DIENE SYNTHESIS OF VINYL AZO ALKANES WITH METHYL VINYL KETONE -U-

AUTHOR--(02)-ZELENIN, K.N., MATVEYEVA, Z.H.

COUNTRY OF INFO--USSR

SOURCE--ZH. URG. KHIM. 1970, 6(4), 717-19

DATE PUBLISHED--70

M

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AZO COMPOUND, ORGANIC SYNTHESIS, ALKANE, ALIPHATIC KETONE,
CHROMATOGRAPHIC SEPARATION, DIENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1962

STEP NO--UR/0366/T0/006/004/0717/0719

CIRC ACCESSION NO--AP0125551

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--30 OCT 70

CIRC ACCESSION NO--APO125551
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RN:NCME:CH SUB2 (Z. M. MATVEEVA,
ET AL., 1969) ENTER DIELS-ALDER REACTIONS WITH H SUB2 L:CHCOMC GIVING
MIXTS. OF I,(R,SUBSTITUTED),5,ACETYL,3,METHYL,DELTA
PRIME2,TETRAHYDROPYRIDAZINE (I) WITH ITS 6,ACETYL ANALOG, (II) (R IS ME,
ET, PR, OR ISO-PR). I AND II WERE SPED. BY COLUMN CHROMATOG. ON AL
SUB2 C SUB3. THE RELATIVE ANTS. OF I AND II DEPEND ON R AND ARE IN
AGREEMENT WITH THE SUBSTITUENT EFFECTS QBSO. IN DIELS-ALDER SYNTHESIS
INVOLVING HYDROCARBON DIENES. FACILITY: VOENNOMED. AKAD. IM.
KIROVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--13NDV70
TITLE--FRICTION AND WEAR OF ANTI FRICTION COMPOSITION MATERIALS BASED ON
TEFLON 4 WITH LEAD -U-
AUTHOR-(02)-ISTOMIN, N.P., NATVEYEVSKIY, R.H.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, VESTNIK MASHINOSTROYENIYA, NO 2, 1970, PP 47-50

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ANTIFRICTION MATERIAL, LEAD, TEFLON, METAL CONTAINING POLYMER,
WEAR RESISTANCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1069

STEP NO--UR/0122/70/000/002/0047/0050

CIRC ACCESSION NO--AP0130676

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 033

CIRC ACCESSION NO--APO130696
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS SHOWN THAT THE ADDITION OF
LOW DISPERSION LEAD TO ANTI-FRICTION COMPOSITION MATERIALS BASED ON
TEFLON 4 DECREASES THE COEFFICIENT OF FRICTION AND SIGNIFICANTLY
INCREASES THEIR WEAR RESISTANCE.

UNCLASSIFIED

1/2 037

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--SOME ASPECTS OF THE EFFICIENCY RATING OF SPACE INFORMATION SYSTEMS

-U-

AUTHOR--MATVEYEVSKIY, S.

M

COUNTRY OF INFO--USSR, FRANCE

SOURCE--AUTOMATIC CONTROL IN SPACE, 3RD I F A C SYMPOSIUM, TOULOUSE,
FRANCE, MARCH 2ND-6TH, 1970

DATE PUBLISHED-----70

SUBJECT AREAS--SPACE TECHNOLOGY, ELECTRONICS AND ELECTRICAL ENGR.,
BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--PRODUCTION EFFICIENCY, MODEL, ALGORITHM, SCIENTIFIC
INFORMATION, SPACECRAFT DATA COLLECTION CENTER, SPACECRAFT DATA ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0036

STEP NO--FR/0000/70/000/000/0000/0000

CIRC ACCESSION NO--A0129326

UNCLASSIFIED